

Amend

11. (Amended) The pad assembly of claim 6 wherein the backing member comprises an axisymmetric member.

REMARKS

Claims 1-23 and 36-41 are pending in the application. In the Office Action dated September 11, 2002, the Examiner took the following action: (1) rejected claims 1-3 and 5-11 under 35 U.S.C. § 102(b) as being anticipated by Voris (U.S. 4,357,011); (2) rejected claims 12-15 and 18 under 35 U.S.C. § 102(b) as being anticipated by Voris; (3) rejected claims 19-21 and 23 under 35 U.S.C. § 102(b) as being anticipated by Voris; (4) rejected claims 36-39 and 41 under U.S.C. § 102(b) as being anticipated by Voris; and (5) rejected claims 4, 16-17, 22 and 40 under U.S.C. § 103(a) as being unpatentable over Voris. Applicant respectfully requests reconsideration of the application in view of the foregoing amendments and the following remarks.

As a preliminary matter, Applicant affirms the election to prosecute invention I (claims 1-23 and 36-41) at this time without traverse and without prejudice.

Some of the technical differences between the applied references and various embodiments of the invention will now be discussed. Of course, these discussed differences, which are disclosed in detail in the patent specification, do not define the scope or interpretation of any of the claims. Where presented below, such discussed differences merely help the Examiner appreciate important claim distinctions discussed thereafter.

Applicant teaches apparatus and methods for pad assemblies for exercise machines that provide improved pressure distribution characteristics during an exercise. In one embodiment, Applicant teaches a pad assembly for an exercise machine that includes a compressible layer having a first surface adapted to engage a portion of a user's body and a second surface opposite from the first surface. The pad assembly further includes a backing member having a non-planar surface engaged with the second surface of the compressible layer. Significantly, the backing member is shaped to provide an approximately uniform-thickness portion of the compressible layer (or alternately, an approximately uniform-pressure portion) when a compression force is applied to the first surface during an exercise.

In one alternate embodiment, the backing member of the pad assembly may be an axisymmetric member, as shown, for example, in Applicant's Figure 3. In a further alternate embodiment, the second surface of the compressible layer may include a depressed portion adapted to fittingly engage at least a portion of the contoured backing surface, as best shown, for example, in Applicant's Figure 11.

The novel pad assemblies taught by Applicant may advantageously improve the pressure distribution on a user's body during an exercise. Because pad assemblies having an approximately uniform-thickness portion may more evenly distribute the forces over the user's body, the user may be less likely to experience discomfort during an exercise, and the user's satisfaction with the exercise machine may be enhanced.

Voris

Voris (U.S. 4,357,011) teaches a weight machine having a pair of adapters 12 mounted to a press bar 14 and a shoulder pad assembly 22 attached to each adapter 12. Has been shown in Figure 3, Voris teaches that the shoulder pad assembly 22 includes a central block 52 having a longitudinally concave surface. (4: 54-58). One or more layers of foam 64 are engaged against the concave surface of the central block 52, and are covered with a covering material 66. As best shown in Figures 1 and 2, in operation, a user's shoulder is engaged against the covering material 66 and compresses the foam layers 64 against the concave surface of the central block 52.

Voris does not disclose, teach, or fairly suggest the novel pad assemblies taught by Applicant. Specifically, Voris does not teach or suggest a pad assembly having a *backing member that is shaped to provide an approximately uniform-thickness portion of the compressible layer (or alternately, an approximately uniform-pressure portion) when a compression force is applied to the first surface during an exercise*. Although Voris teaches that the backing surface of the central block 52 that engages with the foam layers 64 is concave, Voris is silent with regard to shaping the backing member to provide an approximately uniform-thickness portion (or approximately uniform-pressure portion) as disclosed by Applicant. There is no teaching or suggestion in Voris of the desirability of providing a backing member shaped to

provide an approximately uniform-thickness portion (or approximately uniform-pressure portion).

Simply because Voris teaches that the backing surface of the central block 52 is concave does not lead to the conclusion that Voris teaches that the backing member should be shaped in the manner taught by Applicant's. For example, Voris fails to teach or even mention the characteristics of the foam layers 64 during compression (Figure 1B), much less the desirability of providing a backing member shaped to provide an approximately uniform-thickness portion (or approximately uniform-pressure portion). Voris also fails to discuss any of the variables that are involved in providing such a backing member, including anticipated shape of the portion of the user's body to pad assembly is intended to engage, the anticipated forces on the pad assembly, the shape of the outer surface of the compressible layer, and other characteristics of the compressible layer. (Specification, page 7, lines 16-20). Finally, examination of the compressed condition of the shoulder pad assembly 22 shown in pad Figure 1B fails to provide any support or suggestion that Voris appreciated the desirability of providing a backing member shaped to provide an approximately uniform-thickness portion (or approximately uniform-pressure portion).

Furthermore, Voris fails to teach or fairly suggest an axisymmetric backing member having a backing surface shaped in the prescribed manner, as shown, for example, in Applicant's Figure 3. The central block 52 is clearly not an axisymmetric member, nor is the concave surface thereof. For this additional reason, Voris fails to disclose, teach, or fairly suggest the pad assemblies disclosed by Applicant.

There is also no teaching or suggestion in Voris of the second surface of the compressible layer including a depressed portion adapted to fittingly engage at least a portion of the contoured backing surface, as best shown, for example, in Applicant's Figure 11. As clearly shown in Figure 3 of Voris, the surface of the foam layers 64 that engages the concave surface of the central block 52 is completely smooth and planar, and does not have a depressed portion adapted to fittingly engage at least a portion of the contoured backing surface. Thus, for this additional reason, Voris fails to disclose, teach, or fairly suggest the pad assemblies disclosed by Applicant.

- I. *Rejection of claims 1-3 and 5-15, 18-21, 23, 36-39, and 41 under 35 U.S.C. § 102(b) as being anticipated by Voris, and rejection of claims 4, 16-17, 22 and 40 under U.S.C. § 103(a) as being unpatentable over Voris.*

Claims 6, 2-5 and 7-11

Turning now to the specific language of the claims, claim 6 recites a pad assembly for an exercise machine, comprising a compressible layer having a first surface adapted to engage a portion of a user's body and a second surface opposite from the first surface, and a backing member having a non-planar surface engaged with the second surface of the compressible layer, and *wherein the non-planar surface of the backing member is shaped to provide an approximately uniform-thickness portion of the compressible layer when a compression force is applied to the first surface during an exercise.* (emphasis added).

As set forth more fully above, Voris does not disclose, teach, or fairly suggest, the pad assembly recited in claim 6. Specifically, Voris does not teach or suggest a pad assembly that includes a backing member having a non-planar surface *shaped to provide an approximately uniform-thickness portion of the compressible layer when a compression force is applied to the first surface during an exercise.* Voris is silent on providing a backing member having a shape that meets this condition, and there is nothing in Voris from which to reasonably infer that Voris appreciated the desirability of providing a backing member meeting this recitation. Therefore, claim 1 is patentable over Voris.

Claims 2-5 and 7-11 depend from claim 6 and are patentable over Voris for the same reasons as claim 6 and also due to additional limitations contained in these claims. For example, claim three recites the pad assembly of claim 6 wherein the non-planar surface comprises a contoured portion that *provides a compressed shape of the compressible layer that approximately corresponds with an anticipated shape of the portion of the user's body.* Claim 4 recites the pad assembly of claim 6 wherein the non-planar surface comprises a contoured portion having a radius of curvature within the range from approximately 1.5 inches to approximately 7.0 inches. Claim 7 recites the pad assembly of claim 6 *wherein the approximately uniform-thickness portion is co-extensive with a portion of the first surface adapted to engage the portion of the user's body.* Claim 8 recites the pad assembly of claim 6 wherein the non-planar surface of the backing member is shaped to provide an approximately

uniform-pressure portion when a compression force is applied to the first surface during an exercise. And claim 11 recites the pad assembly of claim 6 *wherein the backing member comprises an axisymmetric member.* These additional limitations are also not taught or fairly suggested by Voris.

Claims 12-18

Similarly, claim 12 recites a pad assembly for an exercise machine, comprising a compressible member having a first surface adapted to engage a portion of a user's body and a second surface opposite from the first surface, *the second surface being adapted to engage a contoured backing surface such that a compression force applied to the first surface provides an approximately uniform-thickness portion of the compressible member between the first surface and the contoured backing surface.* (Emphasis added).

Again, as set forth more fully above, Voris does not disclose, teach, or fairly suggest, the pad assembly recited in claim 12. Specifically, Voris does not teach or suggest a pad assembly that includes a compressible member having a second surface, *the second surface being adapted to engage a contoured backing surface such that a compression force applied to the first surface provides an approximately uniform-thickness portion of the compressible member between the first surface and the contoured backing surface.* As noted above, Voris is silent on providing a backing member having a shape that meets this condition, and there is nothing in Voris from which to reasonably infer that Voris appreciated the desirability of providing a backing member meeting this recitation. Therefore, claim 12 is patentable over Voris.

Claims 13-18 depend from claim 12 and are patentable over Voris for the same reasons as claim 12 and also due to additional limitations contained in these claims. For example, claim 13 recites the pad assembly of claim 12 *wherein the second surface comprises a depressed portion adapted to fittingly engage at least a portion of the contoured backing surface.* Claim 15 recites the pad assembly of claim 12 *wherein the approximately uniform-thickness portion is co-extensive with a portion of the first surface adapted to contact the portion of the user's body.* Claim 16 recites the pad assembly of claim 12 wherein the contoured backing surface comprises a contoured portion having a radius of curvature within the range from

approximately 1.5 inches to approximately 7.0 inches. And claim 18 recites the pad assembly of claim 12 wherein, when the compressible force is applied, the compressible member provides a first surface *approximately corresponds with an anticipated shape of the portion of the user's body*. These additional limitations are also not taught or fairly suggested by Voris.

Claims 19-23

Furthermore, claim 19 recites a pad assembly for an exercise machine, comprising a layer of compressible padding having a first surface adapted to engage a portion of a user's body and a second surface opposite from the first surface, and a backing structure attached to the layer of compressible padding and having a backing surface proximate the second surface, the *backing surface being shaped to provide an approximately uniform-thickness portion of the layer of compressible padding when a compression force is applied to the first surface*. (emphasis added).

As set forth more fully above, Voris does not disclose, teach, or fairly suggest, the pad assembly recited in claim 19. Specifically, Voris does not teach or suggest a pad assembly that includes a backing member having a backing surface *shaped to provide an approximately uniform-thickness portion of the layer of compressible padding when a compression force is applied to the first surface*. Voris is silent on providing a backing member having a shape that meets this condition, and there is nothing in Voris from which to reasonably infer that Voris appreciated the desirability of providing a backing member meeting this recitation. Therefore, claim 19 is patentable over Voris.

Claims 20-23 depend from claim 19 and are patentable over Voris for the same reasons as claim 19 and also due to additional limitations contained in these claims. For example, claim 20 recites the pad assembly of claim 19 *wherein the backing surface is contoured such that the compression force is approximately uniformly distributed over the first surface*. Claim 21 recites the pad assembly of claim 19 *wherein the approximately uniform-thickness portion is co-extensive with the first surface*. Claim 22 recites the pad assembly of claim 19 wherein the backing surface comprises a contoured portion having a radius of curvature within the range from approximately 1.5 inches to approximately 7.0 inches. These additional limitations are also not taught or fairly suggested by Voris.

Claims 36-41

Finally, claim 36 recites a method of exercising, comprising providing a compressible layer having a first surface, and a backing structure having a non-planar backing surface engaged against the compressible layer opposite the first surface, and pressing a portion of a user's body against the first surface *to compress the compressible layer between the portion of the user's body and the non-planar backing surface and to form an approximately uniform-thickness portion of the compressible layer therebetween.* (Emphasis added).

As set forth more fully above, Voris does not disclose, teach, or fairly suggest, the method recited in claim 36. Specifically, Voris does not teach or suggest a method of exercising that includes pressing a portion of a user's body against the first surface *to compress the compressible layer between the portion of the user's body and the non-planar backing surface and to form an approximately uniform-thickness portion of the compressible layer therebetween.* Voris is silent on providing a backing surface that provides an approximately uniform thickness portion of the compressible layer, and there is nothing in Voris from which to reasonably infer that Voris appreciated the desirability of providing a backing member meeting this recitation. Therefore, claim 36 is patentable over Voris.

Claims 37-41 depend from claim 36 and are patentable over Voris for the same reasons as claim 36 and also due to additional limitations contained in these claims. For example, claim 37 recites the method of claim 36 wherein pressing a portion of a user's body against the first surface to compress the compressible layer comprises pressing a portion of a user's body against the first surface *to form an approximately uniform-thickness portion of the compressible layer that is co-extensive with the portion of the user's body.* Claim 38 recites the method of claim 36 wherein pressing a portion of a user's body against the first surface to compress the compressible layer comprises pressing a portion of a user's body against the first surface *to form an approximately uniform-pressure distribution on the portion of the user's body.* These additional limitations are also not taught or fairly suggested by Voris.

For the foregoing reasons, Applicant respectfully request reconsideration and withdrawal of the Examiner's rejection of claims 1-3 and 5-15, 18-21, 23, 36-39, and 41 under

35 U.S.C. § 102(b) as being anticipated by Voris, and rejection of claims 4, 16-17, 22 and 40 under U.S.C. § 103(a) as being unpatentable over Voris.

CONCLUSION

In light of the foregoing amendments and remarks, Applicant believes that pending claims 2-23, and 36-41 are in condition for allowance, and that action is respectfully requested. In accordance with 37 CFR § 1.121, attached hereto is an attached page entitled "Version with Markings to Show Changes Made" showing the specific changes made to the claims by the current amendment. If there are any remaining matters that can be handled in a telephone conference, the Examiner is invited to telephone the undersigned attorney, Dale C. Barr, at (206) 903-8745.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Please cancel claim 1, and amend claims 2-6 and 8-11, as follows:

2. (Amended) The pad assembly of claim 6 [1] wherein the backing member comprises a contoured support attached to the second surface.

3. (Amended) The pad assembly of claim 6 [1] wherein the non-planar surface comprises a contoured portion that provides a compressed shape of the compressible layer that approximately corresponds with an anticipated shape of the portion of the user's body.

4. (Amended) The pad assembly of claim 6 [1] wherein the non-planar surface comprises a contoured portion having a radius of curvature within the range from approximately 1.5 inches to approximately 7.0 inches.

5. (Amended) The pad assembly of claim 6 [1] wherein the first surface comprises a concave portion adapted to engage a portion of the user's body.

6. (Amended) A pad assembly for an exercise machine, comprising:
a compressible layer having a first surface adapted to engage a portion of a user's
body and a second surface opposite from the first surface; and
a backing member having a non-planar surface engaged with the second surface
of the compressible layer, and [The pad assembly of claim 1] wherein the non-planar
surface of the backing member is shaped to provide an approximately uniform-thickness
portion of the compressible layer when a compression force is applied to the first surface
during an exercise.

8. (Amended) The pad assembly of claim 6 [1] wherein the non-planar surface of the backing member is shaped to provide an approximately uniform-pressure portion when a compression force is applied to the first surface during an exercise.

9. (Amended) The pad assembly of claim 6 [1] wherein the backing member comprises a coupling assembly adapted to attach to an exercise machine.

10. (Amended) The pad assembly of claim 6 [1] wherein the backing member comprises a contoured backing plate.

11. (Amended) The pad assembly of claim 6 [1] wherein the backing member comprises an axisymmetric member.